

Notice of Allowability

Application No.

10/825,700

Applicant(s)

CHANDLER, CHRISTOPHER
JAMES ELPHINSTONE

Examiner

Peter Coughlan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/23/2007.
2. ☒ The allowed claim(s) is/are 1-32.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____

JOSEPH P HIRL
PRIMARY EXAMINER
TECHNOLOGY CENTER 2100

Examiner's Amendments / Reasons For Allowance

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

In the Claims

2. In claims 1, 9 and 14 the last portion of the claim, which states, 'not initiate the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is not to be initiated' is to be deleted. The remaining last portion of these claims read, 'initiate the process specified by the policy in the IT environment if the positive or negative answer and the confidence level indicate that the process is to be initiated.' This removes the portion of the claim(s) 'and' from the last sentence.

Claim 2 is amended to read, 'The system as recited in claim 1, wherein at least one of the two or more different inference techniques includes one of probability calculus, fuzzy logic and evidential logic.

Claim 17 is amended to read, 'The system as recited in claim 16, wherein at least one of the two or more different inference techniques includes one of probability calculus, fuzzy logic and evidential logic.

3. Authorization for this Examiner's Amendment was given in a telephone interview with Mr. Robert Kowert on 3/22/2007.

4. Claims 1-32 are allowed.

5. The following is an Examiner's Statement for reasons for allowance:

The cited art taken alone or in combination fails to teach the claimed invention of a information technology(IT) automation policy based system using multiple inference techniques which employ a processor and memory containing program instructions which implement program instructions to implement a policy based automation mechanism configured to evaluate policies to provide automated computer system administration, wherein each policy specifies a set of one or more rules and a process to be automatically initiated in the IT environment dependent upon an evaluation of the policy, and wherein to evaluate policies, the policy-based automation mechanism is configured to access a policy and information relevant to an evaluation of the policy; evaluate the same policy according to the information using two or more different inference techniques, wherein at least one of the two or more different inference techniques includes one of probability calculus, fuzzy logic and evidential logic which in turn generates a positive or negative answer as to whether a process specified by the policy is to be automatically initiated and a confidence level for the positive or negative answer; and to initiate the process specified by the policy in the IT environment if the

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positive or negative answer and the confidence level indicate that the process is to be initiated.

6. The closest prior art teaches (U. S. Patent Publication 20030051026, referred to as Carter) a processor. (**Carter**, ¶0588) 'Policy evaluation mechanism', 'automated computer system', 'information technology environment' of applicant is equivalent to 'monitors', 'autonomously alters', 'network communications' of Carter. (**Carter**, abstract; Carter uses only one method for policy evaluation.) 'Policy', and 'Information relevant' of applicant is equivalent to 'Network Surveillance and Security Systems' and 'intrusion information' of Carter. (**Carter**, ¶0228) Policy evaluation mechanism is further configured to initiate a process automatically in the IT environment if the answer and the confidence level for the policy evaluation indicate that the process can be performed according to a predetermined confidence threshold. (**Carter**, ¶0791) The policy evaluation mechanism is configured to evaluate policies to provide automated administration for one or more of a storage management mechanism and an application management mechanism. (**Carter**, ¶0228 and 0231) 'Automated computer system', 'information technology environment', 'policy evaluation' of applicant is equivalent to 'autonomously alters', 'network communications', 'monitors' of Carter. (**Carter**, abstract) 'Storage management mechanism' and 'application management mechanism' of applicant is equivalent to 'specialized database algorithm' and 'expert system security intelligence layer' of Carter. (**Carter**, ¶0218) Computer accessible medium. (**Carter**, ¶0147) 'Automatically initiating' of applicant is equivalent to 'self-initiated' of Carter.

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(**Carter**, ¶0239) 'Policy evaluation in a database of historical information' of applicant is equivalent to 'determine the correct response' of it's 'knowledge base' of Carter.

(**Carter**, ¶0006) 'Policy to generate more accurate results' of applicant is equivalent to 'drawing comparisons to prior occurrences to infer appropriate countermeasures' of Carter. (**Carter**, ¶0006) A central decision engine configured to provide automated administration of the IT environment according to one or more high-level policies for the IT environment. (**Carter**, ¶0880)

Complementary art teaches ('Inequalities in Fuzzy Probability Calculus', referred to as **Janssens**) 'Two or more inference techniques' of applicant is equivalent to 'fuzzy logic' and 'fuzzy probability calculus' of Janssens. (**Janssens**, abstract, p211:11-15)

Complementary art teaches (U. S. Patent Publication 20030172133, referred to as **Smith**) to generate an answer and a confidence level for the policy evaluation (**Smith**, abstract). Provide the answer and the confidence level to a user of the system. (**Smith**, abstract)

Complementary art teaches ('A Deductive probabilistic and Fuzzy Object-Oriented Database Language', referred to as **Cao**) FRIL and FRIL++ are examples of an uncertainty logic programming language. (**Cao**, abstract)

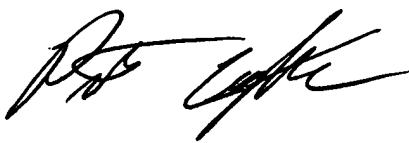
7. The references either by themselves or in combination fail to teach an automatic computer system administration which uses a policy based mechanism to evaluate a computer information technology environment in which uses at least two different inference methods and one of those methods must be probability calculus, fuzzy logic

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or evidential logic to determine if a process is required and implement the resulting process. All current automated evaluating methods of an IT environment use a single evaluation or inference method to arrive at a result. Applicant uses at least two methods in which one method is probability calculus, fuzzy logic or evidential logic.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Peter Coughlan whose telephone number is (571) 272-5990, Monday through Friday from 7:15 a.m to 3:45 p.m. or contact the Supervisor Mr. David Vincent at (571) 272-3080.



Peter Coughlan

Patent Examiner

3/23/2007



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